Thesis

for the degree of

"Doctor of Medicine"
University of Edinburgh

Presented by,

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B.Sc. Edinburgh University
M.R.C.S.E. 1885

April 1889
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On some of the Relations between Menstruation and Insanity.

In the consideration of this important subject, it will be necessary to confine my remarks to a limited portion of the broad field suggested by the above title. With this object I propose to neglect, 1st, all those important and frequent cases of 'Climacteric Insanity,' where the Brain-disturbance appears to be distinctly related to the cessation and irregularity of menstruation occurring at the menopause; 2nd, cases of Insanity apparently due to degeneracy and organic uterine or ovarian disease; 3rd, cases of epileptic insanity where the fits occur only or chiefly at the menstrual epochs, and 4th, cases of mere hysteria from reproductive derangements, frequently met with in ordinary practice.
Before entering more fully into the subject, it will be of interest to consider the effect of menstruation on the mental condition of Jane women.

It is a matter of common observation that, coincidently with the local changes occurring in the reproductive organs at menstruation, there are certain nervous and vascular changes—the heart acts more forcibly, the capillaries of the surface of the body are flushed, the secretions are free; there is often some sickness and loss of appetite, and the temperature rises about half a degree. Dr. Reinf, quoted in the "British Medical Journal" of Feb. 14, 1885, page 342, states that there is a 'menstrual wave' in the temperature of menstruating women, the highest temperature occurring in the 'premenstrual' period, the lowest temperature in the middle of
the first half of the intermenstrual period, thus the curve of the temperature wave corresponds to the pre-menstrual period. Dr. Reint thinks the fall of temperature at menstruation is not merely the effect of the loss of blood.

In this connection we may notice a case mentioned by Bayef Thurston in the British Medical Journal of April 25th 1883, of a girl aged 13 suffering from amenorrhea, breathless and with a pulse of 120, the latter fell to 90 on the establishment of menstruation. This case shows the powerful effect produced in the circulatory system by a derangement of the menstrual function.

In the British Medical Journal of May 8th 1886, page 1282, Sir Barnes observes that menstruation is immediately preceded by increased nervous tension and mobility, manifested in exalted psychic, emotional, and reflex
reflex action, also by vascular tension and turgescence of venous and capillary systems, as shown by phlegmographic tracings, also by an increase in body temperature, and in the excretion of urine. These facts point to a theory of menstrual plethora, which, if not relieved by ordinary menstruation, may be the cause of various neurasthenia and even apoplexy.

In Playfair's 'Midwifery' (1882, Smith Elder & Co) page 76, Goodman suggests a 'cyclical' theory of menstruation evidenced by a general vascular alteration, specially localising itself in the generative organs, and connected with rhythmical changes in their nerve-centres.

Griesinger in his "Mental Pathology and Therapeutics" (New Syd. Soc. 1867), page 200, states that most females are sensitive, nervous and fickleish at
the menstrual periods, and sometimes sad, hypochondriacal, or capricious; these mental changes he refers to a nervous irritation of the brain caused by the genital organs.

The occurrence of headaches and peculiar nervous feelings at menstruation is a matter of every-day observation.

Fechtersleben (Syd. Soc. 1847) in his "Medical Psychology," page 182, mentions that menstruation in sensitive women is always attended by mental uneasiness, irritability, or sadness.

From these observations it is clear that the function of menstruation has a well-marked, though varying influence on the higher psychic centres in the brain; and it is easy to understand how any derangement of the menstrual function may be attended by nervous phenomena, or even insanity.

The nervous might be produced either through nervous or vascular channels.
channels, and it is very probable that in this latter way many brain-disturbances are caused, e.g. a sudden cessation of menstruation might easily be followed by an active hyperaemia of the brain. An excessive menstrual flow by depriving the brain, with the rest of the body, of its proper amount of blood, might render it liable to disease.

The intimate connection between the nerve centres controlling the uterine and ovarian functions, and the psychical centres in the brain may be easily understood from the facts already mentioned, and just as a sudden fright or shock may cause suppression or other disorder of menstruation, so conversely any menstrual disturbance might be expected in its turn to have some influence on the higher brain centres.

To sum up: we must admit that the connection between the
reproductive nerve-centres and the higher psychical centres in the brain is so intimate, and the effect of menstruation on the vascular system is so marked that a priori we should expect menstrual derangement to cause corresponding disturbances in the brain both through the nervous and vascular systems.

Before analysing a number of cases which have recently come under my notice, let us examine the opinions of several authorities on mental disease.

Dickard in his "Treatise on Insanity" (Sherwood Gilbert & Piper 1833) page 125, says that the catamena may be suppressed previous to or during an attack of insanity, and that their return may express mental recovery. Page 207 he states that...
Sudden suppression of the catamenia is often followed by nervous diseases, e.g. hysteria or epilepsy, it being in many cases difficult to decide whether the suppression of the catamenia is the cause or the effect of the insanity. He quotes Burrow's case of mania from suppression of menses, and Esquirol's of a female recovering mentally suddenly on the re-establishment of menstruation; he also states that the restoration of healthy catamenia in madness is only favourable if accompanied by mental improvement, if it occur without mental improvement it may point to the mental disease becoming chronic. Page 136, he quotes Esquirol's two cases of dementia recovering at the appearance of the menses.

Esquirol in his book "Des Maladies Mentales"
Montales (Bailliere, Paris 1858) Vol. 1, page 64, gives statistics of the causes of insanity at the Salpêtrière and at his own establishment, and of the 730 cases having physical causes, 74 were caused by menstrual disorders: page 70, he agrees with Pinchard quoted above, as to the causation of insanity by cholinomorbus and menstrual derangements; he also states that Menstruation may remain normal throughout an attack of insanity; he adds that the menstrual epoch is in any case “in temporis oragonis” for insane women: page 87, he agrees with Pinchard as to the value of the re-establishment of the courses as a means of curing the insanity: page 364 he again insists on this point, but adds that in women predisposed to insanity menstruation often accompanies the onset of the disease, but disappears soon without
any good effect on the mind; so long as amenorrhoea exists, especially in young women we can hope for mental recovery. Cases of McCulloch and Irvine in insanity ceased on the re-establishment of the menses. Vol. ii on pages 174. 235 he further dwells on the importance of the subject and states that dementia was caused by menstrual disorders in 15 out of 235 cases that he had investigated.

Ellis, "Treatise on Dementia" (Holdsworth 1838) page 88, gives a case of amenorrhoeal insanity recovering on the re-establishment of the menses.

Noble, "Psychological Medicine" (Churchill 1853), page 254, states that a large proportion of insane women have their sensibilities exalted at the menstrual periods; page 291 he quotes Poyel's case of insanity of 10 years duration recovering on spontaneous reappearance.
disorders as causes of insanity; page 320 he says that the rarest cases are those where the sudden cessation of the menopause causes acute violent hyperaemia of the brain with generally mania and acute cerebral congestion, but usually the amenorrhoea is the result of the emotional depression, or the result of the co-incident physical disease. He adds that we frequently observe during recovery from insanity that the return of menstruation follows mental recovery, excitement among insane women is common at the menstrual period (cf. Esquirol's 'Impreorogenie'). He also states that rarely does insanity occur at menstruation only, with intermission of mental derangement during the intermenstrual period. He asserts that cases of true amenorrhoeal insanity are cured by emmenagogue treatment, and in these cases alone
is such treatment necessary, recovery rarely immediately following the re-establishment of the menses. Maudsley "Physiology & Pathology of Mind" (Mackallan 1867) page 236, states that the return of the menses often heralds mental recovery, and that epilepsy and insanity are often exacerbated at the menstrual periods. He also quotes Esquirol's case given above.

Blandford "Insanity & its Treatment" (Clare & Boyd 1871) page 59 describes calling amnorrhoea a cause of insanity where it is only a concomitant and states that the reappearance of the menses occurs with and not as a cause of mental recovery.

Dickson "Medicine & relation to Mind" (Lewis 1874) page 143, says that disorders of menstruation are commonly associated with mania but not as its causes.
Sankey "Mental Diseases" (Levi 1884) page 134, states that in mania the re-appearance of the menses via favourable symptoms, but that the menses may remain regular throughout the attack of insanity; he is not at all certain that the re-establishment of the menses otherwise affects insanity beyond showing a return to good physical health.

Savage "Insanity and Allied Neuroses" (Cassell 1884) page 172, mentions the case of a melancholy girl suffering from amenorrhoea who recovered mentally on the occurrence of menstruation. Page 174, he gives the case of a suicidal melancholic patient with amenorrhoea, where the patient suddenly recovered mentally when menstruation returned. He states that unnatural melancholy feelings are frequently associated with amenorrhoea, also that amenorrhoea often persists after the general health is restored in insane women.

Wiglesworth
Higlesworth, "Utterie Disease and Insanity" (Journal of Mental Science, Jan. 1885, p. 509), states that in the majority of cases of insanity with amenorrhoea, the latter is a symptom, not a cause of the mental disease.

Sibbald, "Varieties of Insanity, Amenorrhoeal." (Sibbald's Dictionary of Medicine, Longmans, Green 1883, p. 723), gives (1) A true "amenorrhoeal insanity" caused by a sudden cessation of the menses, with symptoms of acute mania or acute delirious mania or irritability with delusions; its pathology being hyperaemia of the brain, its treatment being directed towards relieving the brain congestion by re-establishing the menses; if unsecured the patient may become a hopeless delirium. (2) In cases of insanity merely accompanied by amenorrhoea.

British Medical Journal, Sept. 1888, page 482. Clouston gives two classes of
of disturbed menstruation and insanity:—(1) Acute mania from sudden suppression of menses.
(2) Melancholia from amenorrhea or amenorrhoea. Hambull gives cases of insane women with long-standing amenorrhoea cured by the re-establishment of the menses after the exhibition of permanganate of potash; the mental recovery following the relief of the amenorrhoea. Savage says, that there is no evidence that amenorrhoea depended on insanity clinically, and that insane cases obstructed amenorrhoea followed with mental weakness.

"British Medical Journal" April 18, 1885

Marryat gives cases of insanity with amenorrhoea where the successful treatment of the latter was followed by mental recovery.

The commissioners in lunacy (England) (Report 1888) gave ovarian and uterine disease as the cause of 14 per cent of cases of insanity in women.
Clouston "Mental Disease" (Churchill 1887) page 79 gives a case of amenorrhoeal melancholia which completely recovered on the occurrence of menstruation. Pages 80, he gives an account of the influence of menstruation on the mind. Pages 82, he states that nearly all acute insanities tend to diminish or suspend menstruation and that there is often an exacerbation of the mental symptoms at the time of menstruation of insane women. He believes that in chronic quiet cases of insanity menstruation is as regular as among the sane. He holds that a few cases of insanity are actually caused by amenorrhoea—two thirds of which cases are melancholic—he mentions examples of this. The connection of the amenorrhoea with the insanity is not as evident in cases of mania with amenorrhoea. He states that mania is commoner than acute mania as the result of sudden amenorrhoea.
Although there was difference of opinion on several points among the authors quoted above, most of them recognize, (1) that menstrual disorders frequently accompany mental diseases in many of its forms. (2) that amenorrhoea is in some cases of mania, melancholia, and stupor, almost certainly the cause of the mental disease. (3) that in this last group of cases the recovery from the mental disease depends upon the successful treatment of the menstrual disorder. (4) that in numbers of insane women there is an exacerbation of the mental symptoms at the menstrual periods. (5) that in many cases of insanity with amenorrhoea the re-establishment of the menses has no effect upon the insanity and in such cases the reappearance of the menses is of unfavourable import. (6) That menstruation may remain normal throughout an attack of insanity.
and apparently have no effect upon the mental condition. (4) That in certain rare cases the patients are only insane at or just before the time of menstruation.

Let us now consider a series of 35 cases which I have recently had under treatment. It will be convenient to discuss them under different headings.

I. This group includes 15 cases of insanity with amenorrhoea, in which the successful treatment of the amenorrhoea was followed by mental recovery.

1. Mary Ann M., aged 21. Admitted April 13th 1889. Cause unknown. "Melancholy, slow, suicidal, anaemic." 29th June "has taken iron since admission and has improved mentally & physically, is still anaemic & slow." 12th July
"Under treatment menstruation has become re-established. Iron still to be continued." Aug 1st. "Improving mentally, cheerful & active." 18th Aug. "Discharged recovered."


"Pil. Al. et Fer. & Expt. Myrrh mixture. M. menstruation returned on April 5th, has since improved mentally, can converse." 2 May 1887. "Has improved very rapidly since last note, talks brightly, works well & is cheerful." 7 May 1887. "Discharged recovered."


cheerful, reads book, converses a little''.
20 April 1887, "Menstruation has returned."
2 May 1887, "Is brighter lately, goes out for day with friends.' Nov. "Suffers from oedema, noisy, talks to herself extrale.
16 Jan 1888, "Improved, and discharged recovered.
Cause unknown, "Subacute mania, at times hysterical." 12 April, "Lately under medical treatment for amenorrhoea (Mynk & Ergot), to-day menstruation was re-established after a year's absence." 2 May. "Since above note has slept better is quieter, still at times hysterical." 30 Aug. "Has continued to improve steadily and was discharged today recovered.

[9]. Mary Ann L. aet. 30, admitted 11 April 1887. Cause unknown, "Acutely maniacal, incoherent and sleepless." 1 Aug. "Still maniacal and noisy." 3 Sept. "Still maniacal & incoherent, has lately been treated for amenorrhoea (Pil Al & Terre), and to-day menstruation became
became re-established. 27 Sept, improving, quiet, occupied, sews and reads. 19 Nov. "has gradually improved and was discharged today recovered."


reserved, and still partially treated. 28 Feb. 1857, "Has been under treatment for amenorrhoea, & to-day menstruated. Rl, Al, St, & F. were used." April. Has continued to improve since last note. Was discharged today recovered.


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30 July, "Improves steadily; still slow & ideless, monotonous. Weak; believed".
30 Aug."Discharged recovered"

Miserable misery. menstruation occurred today 29 Nov. "Has much improved; works in the ward, gains flesh." 23 Dec. "Improves but is still somewhat confused; anxious will probably soon entirely recover.

(15) Harriet B. aged 25. Admitted 19 Oct 1887. "Actively melancholy, suicidal, voices; tell her of her daughter's peril and impending death; urgent, noisy, excited, sleepless." 8 April 1888. "No improvement; noisy, urgent, melancholy, voices, excited." 29 Aug 1888. "Takes Lyco; fed 25 three daily with good effect; quiet denies her former delusions, more cheerful, talks rationally. Helps well"
3 Sept 1858. Menstruation re-established, still takes opium, perfectly favourably.
20 Oct 1858. Opium stopped some weeks ago; patient continues quiet & industrious, rational.
31 Dec. "Recovered, more active, cheerful & industrious.

II. A group of cases in which without any medical treatment, menstruation became re-established as mental recovery progressed. (1) Sarah B act. 21, admitted 12 Nov. 1856. Cause: amenorrhoea. "Acute dementia with stupor, fed artificially, dirty in habits, obstinate and unconscious of her surroundings." 18 Jan. 1857. "Suddenly woke up, scrubbed the floor, talked, did needlework." 1 Aug. 87. "Improving, still weak-minded, but industrious and well-behaved." 8 Sept. 87. "Has on several occasions been unsuccessfully treated for amenorrhoea, lately..."
Menstruation has become re-established. 24 Oct 1887. Discharged recovered.

(2) Ellen W. aged 28. Admitted 5 Feb 1887.

(3) Maggie D. aged 22. Admitted 29 June 1887.

voluntarily." 1 April. "Today laughed and talked, iron inductions and well-behaved." 28 April. "Quiet but suspicious. Received refused treatment for amenorrhoea." Yesterday menstruation returned spontaneously." 28 Aug. Improving but still taciturn and quiet, inductions and more cheerful, almost recovered, but still abnormally quiet and reserved."


III. A group of cases where menstruation became re-established in some cases with, in other cases without, medical treatment, and...
yet no great mental improvement resulted:

(1) Lucretia S.A. 32. Admitted April 19. 1887. "Erotomania, demonstrative, male-maniacal at times. Talks about heavenly visions, erotic, says I am her husband, talks nonsense about babies."

(3) Eliza C, aged 27. Admitted 10 June 1887.


IV A group of cases where the amenorrhoea was unsuccessfully treated, the insanity has apparently become chronic.

(1) Beatrice M., aged 34. Admitted 6 July 1887. "Melancholia with delusions, impulsive and suicidal, fed artificially at times, maniacal & aggressive.

Unsuccessfully treated for amenorrhoea". 25 Aug. 87. "Discharged incurable."


(3)

"Chronic mania, restless, malicious, impulsive, persistent amenorrhoea which was unsuccessfully treated with Ergot. Mynko, Alum. Iron + Permanganate of Potash: no mental improvement."

"Suicidal, melancholy, restless & impulsive, at times maniacal in conduct, but always coherent in speech: amenorrhoea & pain in occipital region like "a screw turning". 25th of May, Opiate led. given three daily at once has a strong effect, making the patient quiet."
quiet and comfortable; treated for
amenorrhoea unsuccessfully.
31st. Still melancholy, restless and
moaning. Maniacal if deprived of opium.

V. A group of cases where the
mental symptoms become worse
just before or during menstruation.

1. Mary Ann E.B. Maniacal, restless
and incoherent; the attack has lasted
for years. She becomes more violent
and aggressive just before menstua-
tion, with the cessation of the
menstrual she becomes quieter and more
manageable.

2. Grace M. Chronic mania, restless
and irritable; at the menstrual periods
she becomes aggressive, insulting and
dangerous.

3. Amelia E.K. Chronic mania,
incoherent and moody; at the
menstrual periods she becomes
homicidal, sleepless noisy and
excited.
(H) *Margaret M.* Chronic Manic.
Irregular, dirty habits, at the
menstrual periods she becomes
aggressive & dangerous & often
requires seclusion.

*Kate M.* Noisy, restless & de-
structive, Chronic Manic.
She becomes impulsive and
aggressive at the menstrual
periods.

**VI** A group of cases where
the patients become manic
just before menstruation and
remain so until the cessation
of the menuses, after which they
remain sane until a few
days before the next menstruation.

(1) *Jessie J.* aged 24. Admitted
7 Nov. 1885. She is usually
rational, amenable & industrious,
and works willingly & well in
the laundry. Just before each
menstruation she becomes abusive
and
and ill-tempered, using foul language, and refusing to work. This mental change continues for a few days after which she becomes again tame.

(2) Mary Ann B. act 40. Admitted July 8, 1888. She had intermittent mania 8 years previously. Ever since then she has been excited just before and during the menstrual periods, at the same time threatening, abusing & attempting to kill her husband.

In the asylum she was well conducted, though while menstruating she became irritable, talked greatly against her husband. She was discharged Sept 11th 1888.

(3) Catharine S. act. 28. Married. Between the menstrual periods she is quiet and apparently sane and writes sensible letters. At the menstrual periods
Periods however she becomes suicidal, dangerous, and maniacal.

From the cases given above I think several conclusions may be drawn, some of which will be quite in opposition to the opinions of several authors already quoted.

I. As to prognosis & treatment

1. In young insane women, so long as amenorrhoea persists, we can hope for mental recovery (cf. Esquirol quoted above).
2. The cure of the amenorrhoea without effect on the mind is of bad prognosis (cf. Group III).
3. Insanity apparently due to amenorrhoea is often not affected by curing the amenorrhoea (Group III: Cases 4 & 5).
(4) Insanity occurring only at menstruation is likely to be cured at the menopause—I have never observed such a case long enough.

(5) The treatment of nearly all cases of amenorrhoea is important in the insane, because in numbers of such cases, even where there is no evidence that the brain disease depends upon the menstrual disorder, the cure of the amenorrhoea has a marked effect for good on the mental condition. The first group of 15 cases bears out this opinion.—Griesinger others hold an opposite opinion.

II. In some cases of Insanity (group ii), the re-establishment of menstruation appears to be coincident with & not the cause.
of mental recovery; this statement seems true only of a certain number of cases and not of all, as stated by some of the authors quoted above (cf. Blandford & others).

III. Group III. These cases bear out the opinion of Esquirol & others that a bad prognosis is indicated when the re-establishment of the senses is not accompanied by mental improvement.

IV. Group IV. This group is unsatisfactory. One can draw no conclusions, for in course of time recovery may take place with or without the re-appearance of menstruation as in Group II.
V. Group V. An important class to recognise: these cases call for special treatment at the menstrual periods, and during convalescence it is necessary to observe them carefully during menstruation. To guard against relapses, one would expect an improvement in such cases after the menopause.

VI. Group VI. Very important medico-legally. It is often difficult to get even medical men to recognise this class as the cases are rare. In trials for murder, homicide, suicide, it might be of the utmost importance to bear this variety of insanity in mind.
in mind. To prove the existence of this disease, the history of the patient would be of more importance than perhaps any present symptoms. Bucknell & Luke & other authors mention similar cases.

General Considerations

It seems clear that the menstrual function whether disordered or not has a distinct effect on the mental condition of women. In some cases the menstrual troubles is premonitory of insanity. When amenorrhoea is the cause of the mental disturbance, the latter is often distinguished by melancholic symptoms, feelings of un-
worthiness and morbid religious ideas.

As a result of my observations, I would lay great stress on the value of the treatment of amenorrhoea and other menstrual disorders wherever they accompany insanity, although by many authors such treatment is not advised. It is very possible that of the 15 cases in group I, some might have lapsed into chronic dementia, or at least have remained longer insane if the menstrual disorder had not been treated.

It is worthy of note that out of the 30 cases in the first four
Groups where amenorrhoea existed, 14 suffered from melancholia in different forms; this bears out what has been remarked by other observers that melancholia with or without Stupor & Primary Dementia depend on or are associated with menstrual derangement more commonly than other forms of Insanity. (Cf. Blowston, quoted above)

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Note as to the Mode of Treatment used.

After the general health, often impaired in Insanity, had been restored, and
In some cases a course of iron administered to the patient were put under medical treatment with the object of restoring the anaemias.

The following prescriptions were used, as well as frequent hot hip baths:

R. Fr. Aloe $3f$ or R. Ratan Bumang $9f$
Fr. Nuxm. $3vi$
Sf. Ssp. $2vi$
Sg. $3f$ t.i.d

R. Aloe Poudre $3i$ to be taken t.i.d.

R. O. A. Es Ferri $1v$.
Sg: Take one three weekly.

R. O. Al. St. Nuxm. $5v$.
Sg: Take three weekly.